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9 November 1977

TRANSLATIONS ON TELECOMMUNICATIONS POLICY,  
RESEARCH AND DEVELOPMENT  
No. 19

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## INTERNATIONAL

### NONALINED RADIO CONFERENCE PREPARATIONS REPORTED

AU261737Y Belgrade Domestic Service in Serbo-Croatian 1400 GMT 26 Oct 77 AU

[Summary] The preparatory meeting for the First Conference of Radio Broadcasting Organizations of Nonaligned Countries will conclude in Sarajevo today. Dordosav Culafic, vice president of the Federal Executive Council, will greet the conference at its opening session tomorrow on behalf of the Federal Executive Council. Delegates to the conference are now arriving in Sarajevo from all parts of the world. Mihajlo Miljanic reports from Sarajevo:

All the preparatory work is now nearly completed. "What still remains to be done now is to determine the text of the declaration of the Conference of Radio Broadcasting Organizations of Nonaligned countries.

The text is being edited just now and will be adopted at the last session of the preparatory meeting this afternoon. The other two documents, that is, the action program and the decision on coordinating cooperation, were ratified and adopted at the session last night." An exhaustive report has been also prepared on all the work of the preparatory work group and its delegations. Thus, all documents will be prepared by tonight to be submitted to the plenary session of the conference tomorrow.

A review of the preparations for the conference shows that "everything accomplished so far has been achieved with a considerable unity of views, even on those details on which views had originally differed, and that views have been easily and painlessly harmonized. A readiness has been expressed, on the basis of the principles of voluntariness, democratic methods and equality, for full cooperation between radio broadcasting organizations of nonaligned countries and for establishing a new international system in the field of information based primarily on justice. Thus, it can be freely concluded that all preparatory work has been very successful and fruitful."

CSO: 5500



INTERNATIONAL

ITALIAN PRIME MINISTER RECEIVES PRC COMMUNICATIONS OFFICIAL

AU261445Y Rome ANSA in English 0820 GMT 26 Oct 77 AU

[Text] Rome, October 26 (ANSA)--Italian Prime Minister Giulio Andreotti received the Chinese Postal and Communications Minister Chung Fu-hsiang at Palazzo Chigi Tuesday evening.

Chung Fu-hsiang, who is currently in Rome at the head of a delegation of experts, was accompanied by the Chinese ambassador to Rome and by Italian Postal and Communications Minister Vittorino Colombo.

CSO: 5500

INTERNATIONAL

SPRY-PRC TALKS ON TELECOMMUNICATIONS COOPERATION HELD IN BELGRADE

AU270823Y Belgrade BORBA in Serbo-Croatian 24 Oct 77 p 4 AU

[Text] Belgrade--The Yugoslav manufacturers of telecommunications installations and equipment have an opportunity to participate in the realization of the PRC plan for modernizing its post and telecommunications networks. This was stated in the final talks between the Yugoslav and Chinese delegations headed by Bosko Dimitrijevic, member of the Federal Executive Council and president of the Federal Committee for Transport and Communications, and Chung Fu-hsiang, PRC minister for posts and telecommunications, respectively. Chinese Ambassador in Belgrade Chang Hai-feng also participated in the talks. It was pointed out that among other things, the promotion of cooperation in the field of posts and telecommunications is also of essential importance for the further development of relations between the two countries. Expressing readiness to develop this cooperation, members of the Chinese delegation--on the basis of what they had seen during their visits to the manufacturers of telecommunications equipment in Belgrade, Zagreb and Ljubljana--highly appraised Yugoslav achievements in this field.

The possibilities to advance cooperation in the field of air and sea traffic and in shipbuilding were also discussed in the talks.

CSO: 5500

## INTERNATIONAL

### BRIEFS

INDONESIAN-SAUDI AGREEMENT--Riyadh, 11 Oct, (ANTARA)--The Indonesian News Agency ANTARA and the Saudi Arabian news agency SPA signed an agreement of cooperation during a ceremony at the Saudi Arabian Ministry of Information here on 10 October. The agreement was signed by Ismail Saleh, the general manager of ANTARA and Dr Abdul Aziz Khoja, Saudi Arabian vice minister of information on behalf of the SPA News Agency. The signing ceremony was attended also by Sheikh Abdullah Uleil, director general of the SPA News Agency, S.A.M. Alaydrus, from the Indonesian Embassy, who was representing the ambassador, and Ginandajar from the Indonesian State Secretariat. According to the agreement the two news agencies will exchange newscasts and experiences. SPA is expected to monitor ANTARA newscasts in Saudi Arabia, while ANTARA will do the same with SPA News Reports in Indonesia. Ismail Saleh, who is touring Middle Eastern countries as a member of President Soeharto's party will also sign a similar agreement with the Middle East News Agency (MENA) this week. [Jakarta ANTARA in English 0700 GMT 11 Oct 77 BK]

CANADA AIDS GHANA--Accra, 13 Oct, GNA--Canada has granted Ghana 6.25 million dollars for the construction of a satellite station, Mr Eric Dwemoh, Ghana's commissioner for transport and communications, disclosed here yesterday. He was speaking to newsmen after his return home from Montreal, Canada, where he led Ghana's delegation to the triennial assembly of the International Civil Aviation Organization (IACO). Mr Dwemoh said negotiation for the construction of the 13-million dollar project had almost been awarded to a Canadian firm, Spar Technology, he added. [Text] [Accra GNA in English 1140 GMT 13 Oct 77 LD]

PORTUGAL-GUINEA-BISSAU TELECOMMUNICATIONS COOPERATION--Important talks have been held in Lisbon between delegations of the State Commissariat of Posts and Telecommunications of Guinea-Bissau and representatives of the Portuguese firm Radio Marconi. The talks are aimed at drawing up a general agreement on cooperation and friendship between the governments of the two countries. The talks envisaged the possibility of increasing the technical assistance granted by Radio Marconi to the Republic of Guinea-Bissau in the field of telecommunications. Various technicians have recently visited Guinea-Bissau to give assistance to the shortwave installations there. Another team is getting ready to help in the setting up and running of the telecommunications support office for the press office, which is to be installed in time for the third PAIGC congress in the second half of November. [Lisbon Overseas Service in Portuguese 1200 GMT 1 Nov 77]

CSO: 5500

INTER-ASIAN AFFAIRS

TELECOMMUNICATIONS DELEGATION LEAVES FOR CAMBODIA

Led by Chi Tui-chau

Peking NCNA in English 1512 GMT 29 Oct 77 OW

[Text] Peking, October 29, 1977 (HSINHUA)--A telecommunications delegation of the People's Republic of China led by Chi Tui-chau, deputy director-general of telecommunications of the Ministry of Posts and Telecommunications, left here today on a friendly visit to Democratic Cambodia at the invitation of its government.

Arrives in Phnom Penh

OW302008Y Peking NCNA in English 1722 GMT 30 Oct 77 OW

[Text] Peking, October 30, 1977 (HSINHUA)--The telecommunications delegation of the People's Republic of China led by Chi Tui-chao, deputy director-general of the telecommunications of the Ministry of Posts and Telecommunications, arrived in Phnom Penh yesterday for a visit to Democratic Cambodia at the invitation of the Government of Democratic Cambodia, according to a broadcast of Radio Democratic Cambodia today. The delegation was warmly greeted at Pochen Tong airport by many cadres of the Foreign Ministry and the Committee of Communications of Democratic Cambodia. Tsao Kuei-sheng, counsellor of the Chinese Embassy to Democratic Cambodia was present on the occasion.

The broadcast said that to consolidate and develop cooperation in the field of posts and telecommunications between the two countries, the telecommunications delegation of the People's Republic of China will hold talks with the delegation of the Committee of Communications of Democratic Cambodia. Mey Prang, president of the Committee of Communications gave a banquet yesterday evening in honour of the delegation. Speaking at the banquet, Mey Prang and Chi Tui-chao both highly praised the great revolutionary friendship and ever-growing militant solidarity between the two parties, peoples and governments.

CSO: 5500

INTER-ASIAN AFFAIRS

PRC TRADE DELEGATION DEPARTS LAOS

OW301258Y Peking NCNA in English 1200 GMT 30 Oct 77 OW

[Text] Vientiane, October 29, 1977 (HSINHUA)--The Chinese Government economic and trade delegation left here for home today after a friendly visit to Laos. The delegation was seen off at the airport by Khamsouk Soumisai, vice-chairman of the National Planning Commission; Nouxai Sithixai, director of the office of the Ministry of Industry and Trade; and other Lao officials. During the visit, the Chinese delegation held talks with the Lao Government economic and trade delegation on economic and trade cooperation between the two countries in 1977-78. An agreement on interest-free Chinese loan to Laos between the Government of the People's Republic of China and the Government of the People's Democratic Republic of Laos was signed today.

CSO: 5500

MONGOLIA

MONTSAME, CTK SIGN COOPERATION AGREEMENT

Document Signed

Ulaanbaatar MONTSAME in Russian 1510 GMT 17 Oct 77 OW

[Text] Ulaanbaatar, 17 October (MONTSAME)--A new cooperation agreement between MONTSAME and the Czechoslovak Press Agency (CTK) was signed here today. The document was signed by S. Purebjab, chairman of the State Information, Radio, and Television Committee of the MPR Council of Ministers and director general of MONTSAME, and O. Svercina, director general of CTK.

The agreement envisages principles for all-round cooperation between the press agencies of the MPR and the CSSR which will raise the business ties between the two fraternal agencies to a qualitatively higher level.

CTK Director General Received

Ulaanbaatar MONTSAME in Russian 1506 GMT 17 Oct 77 OW

[Text] Ulaanbaatar, 17 October (MONTSAME)--S. Sosorbaram, secretary of the MPRP Central Committee, today received Otakar Svercina, director general of the Czechoslovak Press Agency (CTK), and signed a new agreement on cooperation between MONTSAME and CTK.

The meeting, which passed in a warm and cordial atmosphere was attended by S. Purebjab, chairman of the State Information, Radio, and Television Committee of the MPR Council of Ministers and director general of MONTSAME.

CSO: 5500

## MONGOLIA

### BRIEFS

COMMUNICATIONS ADVANCES--Ulaanbaatar, 23 Oct--D. Gotob, MPR minister of communications, says that as a result of Soviet aid during the past 15 years the capacity of telephone exchanges in the country increased 6.7 times, the number of telephone and telegraph service stations 1.7 times and the length of telephone channels 4.9 times. Major tasks have been put forward in this field by the 17th MPRP congress. It is planned to increase the length of intercity telephone channels 1.7-2 times and the capacity of telephone exchanges 30 percent. A decisive role in this regard will be played by the construction of a radio relay line from Ulaanbaatar to Bayan Ologoy with Soviet aid. [Ulaanbaatar MONTSAME in Russian 0521 GMT 24 Oct 77 OW]

CSO: 5500



NORTH KOREA

DPRK ACCUSES ROK OF JAMMING

Pyongyang KCNA in English 1059 GMT 19 Oct 77 OW

[Text] Pyongyang, 19 Oct, (KCNA)--Commenting on the jargon of the "minister of culture and information" of the Pak Chong-hui clique at the puppet National Assembly that we are "sending jamming waves to some areas" of South Korea, NODONG SINMUN today says:

This is a tricky propaganda utterly reversing black and white.

They are so foolish if they think they can convince people that we are jamming someone's waves, the commentary says, and adds: It is none other than the Pak Chong-hui clique who do jamming in our country.

The commentary goes on:

Hating the successful progress of socialist construction in the northern half of the republic and the happy life of our people, the South Korean puppets are desperately trying to undermine them at any cost and even send jamming waves to the northern half to disturb the waves of our radio and television, which are intimate friends of our people in their daily life.

This is a dastardly act intended to harass the political and cultural life of our people, a despicable act contravening publicly recognized international law and international usage and an unpardonable challenge to human civilization.

The Pak Chong-hui clique are deadly afraid that the just struggle of our people for socialist construction in the northern half and the independent and peaceful reunification of the country is widely known to the people through electric waves every moment. This is why the puppets are trying so desperately to bar it.

This is a fact. But the puppets are carrying on a fantastic false propaganda, which reminds us of the old saying that the guilty party files the suit first, the commentary says. The tongue-wagging of the "minister of

culture and information" at the puppet National Assembly, it notes, is a crafty ruse to cover up the criminal act of his clique in jamming against us and to shift the responsibility on to others by misleading public opinion.

The Pak Chong-hui clique resorts to such false propaganda to incite hostile feelings and sow the seeds of discord within the nation and thus freeze division and stay in puppet power, the commentary says and stresses:

The Pak Chong-hui clique should not pin hopes on their foolish act and should immediately give up jamming against us.

If the puppets persist in jamming, defying our repeated warnings, they will be held wholly responsible for the consequences arising from it.

CSO: 5500

PEOPLE'S REPUBLIC OF CHINA

BRIEFS

MINISTER TO ALBANIA, ITALY--Peking, 11 Oct 77 (Hsinhua)--A Chinese Posts and Telecommunications delegation led by Chung Fu-hsiang, minister of posts and telecommunications, left Peking by air this evening for a friendly visit to Albania and Italy. It was seen off at the airport by Vice-ministers of Posts and Telecommunications Shen Kuang and Chu Chun-ho, Albanian Ambassador to China Behar Shtylla and first secretary of the Italian Embassy here Faustino Troni. [Text] [Peking NCNA in English 1839 GMT 11 Oct 77 OW]

CSO: 5500

## VIETNAM

### BRIEFS

NEW WIRED RADIO STATIONS--In the third quarter of 1977, an additional 10 wired radio stations have been installed in major rice growing areas and new economic areas in Phu Khanh Province. The entire province now had a total of 33 wired radio stations. Quang Nam-Danang Province has completed installing four wired radio stations to serve various major economic areas. The 1,200-W Phu Ninh wired radio station is serving water conservancy worksites in the district with 20 large loudspeakers. Both Hien and Phuoc Son districts in the mountainous area also have their own wired radio stations, each with 300-W output. The installation of a 300-W wired radio station and five big loudspeakers on Cham Island has also been completed. [Text] [Hanoi NHAN DAN in Vietnamese 19 Oct 77 p 1]

CSO: 5500

EAST GERMANY

LEGAL ORDER ON AMATEUR RADIO SERVICE PUBLISHED

East Berlin GESETZBLATT DER DEUTSCHEN DEMOKRATISCHEN REPUBLIK in German  
Part I No 27, 6 Sep 77 pp 325-329

[Amateur Radio Order of 1 August 1977 issued by GDR Minister for Posts and Telecommunications]

[Text] Order on Amateur Radio Service--Amateur Radio Order 1 August 1977

On the basis of Article 68 of the Law of 3 April 1959 on Posts and Telecommunications GBI ([legal gazette] I, No 27, p 365), the following order to promote amateur radio in the German Democratic Republic is issued with the agreement of the heads of the appropriate central state organs and the chairman of the central board of directors of the Society for Sport and Technology (GST):

General Provisions

Article 1. Range of Legal Force

This order is in force for the amateur radio service in the German Democratic Republic.

Article 2. Definitions

(1) Amateur radio service refers to radio communication practiced among radio amateurs for training purposes, for technical studies and for the continued technical development of radio communications.

(2) Radio amateurs are duly authorized individuals who, for public benefit and because of technical interest, engage in radio technology and the operation of amateur radio stations. The training of citizens of the German Democratic Republic as radio amateurs, as well as the organization and support of the radio amateurs is the duty of the Society for Sport and Technology.

(3) Amateur radio stations are transmitting and receiving sets which are manufactured, erected and operated by radio amateurs, also including the use of sets manufactured by industry. They may be manufactured, erected and operated as fixed, mobile or portable radio stations.

#### Prerequisite for and Granting of Licenses

#### Article 3. License Obligation

(1) The erection and operation of amateur radio stations, as well as the manufacture, sale or ownership (possession) of transmitters of amateur radio stations is subject to licensing in accordance with the provisions of the Law of 3 April 1969 on Posts and Telecommunications and the implementing regulations issued thereto.

(2) Amateur radio stations consisting of only one receiving set are not subject to licensing by the Ministry for Posts and Telecommunications. However, they must be registered with the German Post Office.

(3) Licenses are subject to a fee.

#### Article 4. Application for Licenses, Issuance and Scope of the License

(1) The licenses are to be applied for through the Ministry for Posts and Telecommunications. Applications by juveniles not having reached the age of 19 must include the written consent of their legal representative. Applicants for a license for erection and operation must demonstrate their aptitude as radio amateurs by passing an examination.

(2) The license is granted in the form of a license certificate subject to conditions. The conditions of the license are a component part of the license certificate.

(3) The license is not transferable.

#### Article 5. Stipulations for Citizens of Other States

(1) A license to erect and operate amateur radio stations can be granted to citizens of other states if the applicant possesses a valid amateur radio license of his state. A further prerequisite is that an agreement concerning the recognition of this license exists between the Ministry for Posts and Telecommunications and the communications administration of the other state.

(2) Citizens of other states who do not possess an amateur radio license of their state may be granted a license if they stay in the German Democratic Republic for longer than 1 year. The prerequisite is that they meet the standards set for radio amateurs and have demonstrated their qualification by means of the examination.

## Article 6. Obligations of License Holders

- (1) The transmitting sets designated in the license certificate may be manufactured, taken possession of, erected or sold only when the license has been granted. This also applies to changes in these sets that affect the conditions of the license.
- (2) Operation of the transmitting sets of an amateur radio station may begin only after clearance through the German Post Office. Before the clearance, a test operation of up to 4 weeks is permissible with the consent of the bezirk directorate of the German Post Office in whose sector the amateur radio station has been erected.
- (3) The manufacturers of industrially produced amateur radio sets must apply for the testing of a manufactured sample by the Ministry for Posts and Telecommunications or by the state testing organ authorized by the ministry. The testing is subject to a fee. Manufacturers must carry out mass production in strict accordance with the model and supply all sets manufactured with a test seal of the Ministry for Posts and Telecommunications.
- (4) The radio amateur responsible for the amateur radio station must be in a position at any time to produce the radio sets designated on the license certificate. He is responsible for seeing to it that the radio sets are protected against unauthorized use as well as any damage and are operated according to regulation, and that no radio communications are undertaken that are counter to state and social requirements for order and security.
- (5) If amateur radio stations of the GST are operated for training purposes to qualify for an amateur radio license, this must take place under the supervision of an authorized and appropriately licensed GST instructor for amateur radio. He assumes responsibility in accordance with Paragraph 4.

## Article 7. Examinations

- (1) The examination according to Article 4, Paragraph 1, to obtain the amateur radio license must be taken before an examination commission consisting of an official delegated by the Ministry for Posts and Telecommunications as chairman and at least three GST experts who have had more than 1 year of experience as radio amateurs.
- (2) The examination is given in accordance with the examination conditions that are established separately by the minister for posts and telecommunications. It is subject to a fee.

## Frequency Ranges, Types of Transmissions and Technical Conditions

## Article 8.

- (1) Radio amateurs may conduct amateur radio operations on the basis of the licenses and authorizations granted to them in accordance with the frequency ranges and types of transmissions stipulated in the appendix, observing the technical conditions listed there.

(2) In accordance with examination conditions, licenses may be limited to certain frequency ranges.

(3) Radio amateurs are entitled to radio communications via terrestrial and cosmic relay radio stations of the amateur radio service on the frequency ranges assigned in accordance with the license. This also applies if these relay stations cause a frequency change into other amateur radio zones of the German Democratic Republic for which the radio amateur concerned does not have a license.

#### Operational Conditions for Amateur Radio Stations

##### Article 9. Admissible Radio Communications

(1) The amateur radio station may be used by the radio amateur only for radio communications with amateur radio stations. Included are amateur radio communications via terrestrial and cosmic relay radio stations of the amateur radio service.

(2) The use of an amateur radio station for the exchange of messages emanating from a third person or destined for a third person is prohibited.

(3) Amateur radio stations may be employed for GST radio broadcasts. In this case, the GST Central Board of Directors must obtain the consent of the Ministry for Posts and Telecommunications.

##### Article 10. Message Transmission

(1) The transmission of radio messages may take place only in open text. The international amateur radio code and the internationally used abbreviations are regarded as open text. For competitions in amateur radio direction-finding, the internationally customary recognition signals are permitted as transmissions.

(2) The reflected power of transmission is to be limited to the minimum necessary for transmission of messages.

##### Article 11. Message Content

(1) Transmissions are to be limited to information of a technical and operational nature.

(2) Amateur radio stations that are employed for radio broadcasts may transmit messages that are causally connected to the amateur radio service or concern other GST message activity.

(3) Transmissions without message transmission are to be limited to the minimum. This does not apply to transmissions for amateur radio direction-finding contests.



- (4) Music transmissions are prohibited.

#### Article 12. Call Signals

(1) At the beginning and end of every transmission or radio connection, the assigned call signal is to be transmitted and repeated during the transmission as often as possible, but at least every 15 minutes.

(2) The use of false or misleading call signals, as well as the operation of an amateur radio station without a call signal, are prohibited.

(3) The established recognition signals for amateur radio direction-finding contests, according to the appendix, are valid as call signals. The following paragraphs 4 through 8 are not applicable to amateur radio direction-finding contests.

(4) Amateur radio operation for training purposes proceeds under the assigned training call signals of the GST amateur radio station.

(5) If the amateur radio station is set up and operated at an authorized second location, the symbol "/a" (alternative) is to be inserted after the assigned call signal corresponding to the notice of clearance.

(6) In transmissions from other than the authorized fixed location, the symbol "/p" (portable) is to be inserted after the call signal.

(7) In transmissions from an amateur radio station which is being used as a mobile radio station, the symbol "/m" (mobile) is to be inserted after the call signal.

(8) In transmissions from an amateur radio station which is being operated aboard a boat or ship, the symbol "/mm" (maritime mobile) is to be inserted after the call signal.

#### Article 13. Temporary Location Changes

Temporary location changes of amateur radio stations extending beyond a period of 48 hours must be reported. The notification must be in the hands of the appropriate bezirk directorate of the German Post Office at least 3 days prior to the location change.

#### Article 14. Operation of Other Amateur Radio Stations

(1) Radio amateurs may operate other authorized and cleared amateur radio stations of the German Democratic Republic in accordance with the licenses granted to them by the Ministry for Posts and Telecommunications. In such cases, the personal call signal is to be inserted after the call signal of the amateur radio station used.

(2) Radio amateurs participating in national or international contests in amateur radio service are authorized to operate another amateur radio station under the call signal of the radio amateur responsible for this amateur radio station--without giving their own call signal. Notification by the responsible radio amateur concerning the participating radio amateurs must be submitted in writing to the appropriate bezirk directorate of the German Post Office at least 8 days prior to the beginning of the contest.

(3) Radio amateurs with a license to erect and operate their own amateur radio stations may, upon recommendation of the GST, be given permission to operate at amateur radio stations of the GSR under their own call signals. Permission is entered on the license certificate by the appropriate bezirk directorate of the German Post Office. Operation in this case must also take place with insertion of the symbol "/a" (alternative).

#### Article 15. Measures Against Interference

Amateur radio stations are to be erected and operated in such a way that they do not affect radio and other telecommunications service. If necessary, special technical and operational orders will be given by the German Post Office to prevent interference by the amateur radio station concerned.

#### Article 16. Message Reception and Telecommunications Secrecy

If messages coming from telecommunications installations are received by radio amateurs that are not destined for them, the contents of the messages, as well as the fact of their reception, must not be conveyed to others. Excepted are the following:

1. Emergency calls;
2. Messages which the law requires to be reported to the police;
3. Messages which are received in connection with radio interference and can help in determining the source of interference;
4. Violations by others of amateur radio service regulations.

#### Article 17. Procedures for Emergency Calls and Reportable Messages

(1) Upon reception of an emergency call, the amateur must immediately interrupt his own radio communications and observe the emergency call. If the emergency call remains unanswered, the appropriate local state organs must be immediately informed concerning the contents of the emergency call.

(2) Messages received that are required by law to be reported must be immediately brought to the attention of the appropriate state organs.

(3) Radio interference as well as violations of the rules of the amateur radio service are to be reported to the German Post Office together with the facts of the case.

#### Article 18. Record-Keeping

Amateur radio stations must keep records of radio communications and the radio amateurs conducting them.

#### Article 19. Interruption of Participation in Amateur Radio Service

(1) In substantiated cases, a radio amateur may interrupt his participation in the amateur radio service for the duration of up to 3 years without expiration of his license.

(2) If the interruption exceeds 6 months, the license certificate is to be deposited with the appropriate bezirk directorate of the German Post Office together with a statement of the reasons. If the amateur radio station remains in the possession of the radio amateur, a permit for its possession will be issued by the bezirk directorate of the German Post Office for the duration of the interruption. The radio amateur must prevent operation of the amateur radio station through technical measures.

#### Limitation and Expiration of the License

#### Article 20. Limitation of the License

(1) For collective state and security reasons and with the consent of the heads of the appropriate central state organs:

1. Conditions of operation may be limited or changed;
2. Suspension of amateur radio operation may be ordered;
3. Special regulations may be issued.

(2) The notification of license holders of amateur radio stations with regard to the rules mentioned in Paragraph 1 is given through the bezirk directorate of the German Post Office.

(3) The license holder of the amateur radio station is obligated to follow such directives without delay at his own expense.

#### Article 21. Expiration of the License

(1) The license expires under the following conditions:

1. Through relinquishment;
2. With the abandonment of residence in the German Democratic Republic;
3. Upon expiration of 2 years following issuance of the license certificate if the radio station designated therein has not been reported for clearance within this period;
4. Upon interruption of participation in the amateur radio service of more than 3 years;

5. Upon resignation by radio amateurs of the German Democratic Republic from the GST;

6. Through revocation by the Ministry for Posts and Telecommunications.

(2) If the license expires, the license certificate must be immediately returned to the appropriate bezirk directorate of the German Post Office. In this connection, orders issued by the bezirk directorate of the German Post Office concerning the further disposition of no longer authorized radio stations are binding.

#### Final Regulations

#### Article 22. Fees

Fees are charged in accordance with the amateur radio tariff regulation.

#### Article 23. Transitional Provision

License certificates issued prior to the effectiveness of this order remain valid until 31 December 1979.

#### Article 24. Right of Control

The German Post Office is authorized to control compliance with the stipulations of this order, by amateur radio stations in particular.

#### Article 25. Effective Date

(1) This order becomes effective on 1 January 1978.

(2) Simultaneously the following orders will no longer be in force:

1. The order of 22 May 1965 on the Amateur Radio Service--Amateur Radio Order--(GB1. II, No 58, p 393);

2. Order No 2 of 2 December 1974 on the Amateur Radio Service--Amateur Radio Order--(GB1. I, No 64, p 613).

Berlin, 1 August 1977

[Signed Calov, state secretary; for the minister for posts and telecommunications]

#### Appendix to preceding order

#### Frequency Ranges, Types of Transmissions and Technical Conditions

1. Frequency Ranges, Input Capacities and Limits of Secondary Emissions

For the amateur radio service of the GDR the following listed frequency ranges, input capacities and limits of undesired secondary emissions are permitted.

Use of the frequency ranges and the maximum permissible input capacity depend on the scope of the amateur radio license issued.

Frequency ranges (MHz) [megacycles]	Admissible direct current input power (W) [watt]	Admissible limits of secondary emissions (dB)* [decibels] in the frequency range	
		$\leq 40$ MHz	$> 40$ MHz
3.5 ... 3.8 7.0 ... 7.1 14.0 ... 14.35 21.0 ... 21.45 28.0 ... 29.70	500	40	60
144.0 ... 146.0 430.0 ... 440.0	500	60	60
5,650.0 ... 5,670.0 10,000.0 ... 10,500.0	100	not established	

#### Admissible Direct Current Input Power

The maximum permitted direct current input power is the power supplied to the output electrode of the transmission output stage with single tone modulation and full modulation.

#### Admissible Limits for Secondary Emissions

Secondary emissions are emissions on one or several frequencies outside of the required band width, whose level can be reduced without influencing the transmission of the message concerned. Secondary emissions include harmonious, parasitic and mixed-frequency emissions. The admissible limit is the minimum ratio between the field intensities of the effective signal and the secondary emissions concerned, measured in the direction of maximum reflection of the emissions.

- \* Regardless of the specifications, the secondary emissions are to be kept to the lowest value consonant with the condition of the equipment and which excludes interference with other radio services, including radio broadcasts and television. For the admissible limits of industrially produced amateur radio sets, the conditions contained in the manufacturing licenses are valid.

The transmitter output stage is to be fully modulated for that purpose, with multiple tone modulation being permissible.

## 2. Types of Transmissions

For amateur radio stations of the GDR the following types of transmissions are permitted, depending on the scope of the license in every case:

- A Amplitude modulation
- A1 Telegraphy through keying in and keying out without modulation through an audio frequency
- A2 Telegraphy through keying in and keying out of one or several amplitude-modulating audio frequencies or an amplitude-modulated emission
- A3 Telephone, double side band
- A3A Telephone, single side band, reduced carrier
- A3J Telephone, single side band, suppressed carrier
- A4J Narrow-band television  
single side band, frequency-modulated auxiliary carrier
- A5 Television, double side band
- A5C Television, residual side band
- F Frequency or phase modulation
- F1 Telegraphy, radio teletype  
Frequency re-keying without modulation through an audio frequency;  
one of two frequencies is emitted at any given time.
- F2 Telegraphy, radio teletype  
Keying in and keying out of a frequency-modulating audio frequency  
or a frequency-modulated emission
- F3 Television, maximum modulation index 1
- F4 Narrow-band television, maximum modulation index 1

The operation of amateur radio stations in transmission types A5 and A5C is permitted only above 430 MHz and in transmission type F2 only above 144 MHz.

Transmission types A4J, A5, A5C and F4 must be applied for separately. Application must be made through the Society for Sport and Technology to the Ministry for Posts and Telecommunications.

## 3. Additional Technical Conditions

- (1) Amateur radio transmission stations must be equipped with proper frequency control installations whose measuring accuracy for the frequency ranges below 500 MHz must be at least  $1 \times 10^{-4}$ .
- (2) Amateur radio transmitters must be capable of reducing the direct current input power of the transmitter output stage to a volume of = 50 watts. The power reduction must not be made through circuit mistuning.

(3) Regardless of clearance of the amateur radio station by the German Post Office, antenna, ground wire, power supply and reception installations must be executed in accordance with prevailing GDR norms (TGL), architectural provisions and safety rules for workers.

#### 4. Additional Conditions for Amateur Radio Direction-Finder Units

(1) These installations may be operated only within the following frequency ranges: 3,500 ... 3,800 kHz [kilocycles per second in transmission type A1  
144 ... 146 MHz in transmission type A2.

(2) The admissible direct current input power of transmitters for amateur radio direction-finding contests may not exceed 10 watts.

(3) Sole admissible identification signals of emissions are MOE, MOI, MOS, MOH, MO5 and MOT.

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## INTER-ARAB AFFAIRS

### BRIEFS

IRAQI-IRANIAN COMMUNICATIONS TALKS HELD--Hamid Sa'id, technical adviser at the Communications Ministry, returned to Baghdad today after leading a technical delegation on a 1-week visit to Iran. During the visit the delegation held talks with Iranian officials on linking the two countries by a telephone network capable of transmitting 600 simultaneous telephone calls. This will meet the increased requirements over the coming 20 years. Such a network will also provide a number of countries in the area with links to Iran and Afghanistan via Iraq. [Text] [Baghdad INA in Arabic 1100 GMT 13 Oct 77 JN]

CSO: 5500



NORTH AFRICAN AFFAIRS

BRIEFS

CAIRO-TUNIS TELEX LINK--~~Tunis~~ (TAP)--A direct telex link between MENA in Cairo and TAP in Tunis has been established through the two agencies' offices in Paris. [Tunis TAP in French 1300 GMT 21 Oct 77 LD]

CSO: 5500

EGYPT

BRIEFS

RADIO STATIONS CONSTRUCTED IN EGYPT--A group of Egyptian and Japanese experts have completed the construction work for 21 wireless stations which were included in the microwave project. The project aims to connect Cairo by radio and television with North and West Africa and will cost approximately 10 million pounds. Construction which began 3 years ago will be completed this December. These stations were set up between Cairo, Alexandria, Matruh and Al-Sallum where it will be possible to transmit all wire, wireless, radio and television waves along the northwest coast. [Text] [Cairo AL-AHRAM in Arabic 26 Sep 77 p 4]

CSO: 5500

IRAN

BRIEFS

NEW RADIO TRANSMITTERS--According to the engineering department of the National Iranian Radio and Television Organization, a new radio transmitter with a capacity of 100 kilowatts will become operational on 26 October in Tabriz. This will be in addition to another 100-kw reserve transmitter made available recently. Moreover, beginning 31 October Jiroft transmitting station will be broadcasting with a 20-kw transmitter. The two transmitters will be carrying the first network's programs. In addition to the above transmitters, Yazd radio transmitter will be boosted by 10 kilowatts, thus increasing its capacity to 20 kw. This change will also take place as of 26 October. On 31 October, Marivan transmitter will also receive another 10-kilowatt boost, thus making it a 20-kw transmitter. The transmitters in both Yazd and Marivan will carry the first network's programs. [Excerpt] [Teheran Domestic Service in Persian 1000 GMT 23 Oct 77 LD]

CSO: 5500

## DIRECT TELEPHONE DIALING INSTALLED

Kuwait AL-RA'Y AL-'AMM in Arabic 18 Aug 77 p 5

[Article by Muwafaq Bani al-Marja: "Direct Telephone Dialing From Kuwait to the Rest of the World Will Begin in September: Will Direct Dialing Be Available Only to the Elite or Will It Be Available to All Consumers?"]

[Text] Hello Nations!!

A favorite phrase that was popularized by actor Tawfic al-Daqa but which will be on the tongue of every Kuwaiti come the start of next September! Hello nations; hello London; hello Bahrain; hello Iraq, Qatar, Emirates and Japan!!

It is a direct telephone dialing which connects the customer in Kuwait with all states and nations without the need for assistance or waiting.

For purposes of testing, direct dialing began a few days ago with Bahrain. Cables are being connected with agreed upon countries and exchange centers are being transformed to realize this modern service. Inevitably, development is accompanied by difficulties. Since car phones have caused an "increase" in disruptions, can direct dialing phones lead to the "internationalization of disruptions?"

Also, the enjoyment of this modern service requires a deposit of no less than 1,000 dinars, which will make the service limited to the able few; what about the general population? Is the service for the elite or for the masses?

### Direct Telephone Dialing Has Begun With Bahrain

A few days ago, direct dialing experiments began with Bahrain, and work is briskly underway to adapt the exchange centers to the new equipment in order to be able to connect directly with the world by early next September.

During a tour of the wire and wireless communications building with Mr Faysal Yusuf al-Majid, vice-president of telephone engineers, and Mr 'Abd-al-Rahman al-'Awdi, director of operations, we met engineer Muhammad al-'Aryan,

installation supervisor, while they, along with a number of technicians were busy with the adaptation work of exchange centers and with the installation of modern equipment at the international exchange.

Engineers Qarini and al-'Aryan explained some of the technical features of direct dialing telephones, and they revealed the extent of the accuracy of the electronic accounting equipment attached to the exchange equipment.

AL-RA'Y AL-'AMM learned that the new equipment makes available to Kuwait 1,400 outside exchanges containing 110 connection plates, while the old exchange had only 38 plates. And, while the old exchange operated mechanically, the new equipment operates electronically.

#### Modern Equipment Meets the Needs

In a discussion with the vice-president of telephone engineers, Mr Faysal al-Majid said:

"The new equipment permits the customer to communicate 24 hours a day and without an intermediary with whomever he wishes in any country in the world that possesses similar capabilities and equipment." He added that through direct phone dialing it is expected that delays of overseas calls will end, even with non-subscribing countries, for the new international exchange provides 1,400 outside exchanges. In September 110 communication plates, each of which provides six exchanges, will be available and will be sufficient to easily meet all the demand until the middle of the 1980s.

#### The Equipment Facilitates Communication and Dealing

Engineer al-Majid explained that direct phone dialing was initially aimed to connect Kuwait with those countries with whom there are frequent calls in order to facilitate interaction. Also, billing by the minute saves the customer a lot of expenses, and the electronic equipment prevents the occurrence of any error whereby the cost of the call is calculated precisely from the moment of connection until its termination.

He also said that the plates and exchange centers provided by the new exchange will cover the increasing needs of Kuwait until the middle of the 1980s. During the coming years a study to bolster the equipment on the basis of its practical operation and the extent of the actual need will be conducted.

#### Changing Numbers for Coordination

The vice-president of telephone engineers explained the change of the outside call numbers during this period by saying: "The change is a form of necessary coordination as we have assumed that all outside calls should begin with the number zero."

He said that most Arab states can, in a short time, take measures to communicate directly with Kuwait and that contacts and efforts are underway in this regard.

## The Arab Satellite a Qualitative Leap

He [vice-president of telephone engineers] said that the Arab satellite can contribute towards the realization of this qualitative leap of developed cable and wire-less communications.

## Will the Difficulties Be Internationalized?

In an answer to a question concerning the possibility of direct outside calls from a car phone, he said that this is possible if the ministry wished it. The procedure, however, requires organization and linkage. Regarding the fear of "internationalizing the difficulties," he said that the plates and safeguards that specify the direct responsibility of the customer of all that goes on through his phone will insure the prevention of this irresponsible tampering; and that he has great confidence in the prudence of customers and their willingness to use the system properly in a manner which will realize the common interest.

## The Possibility of Accommodating All Customers

Regarding the capacity of the international exchange to accommodate all customer requests for the new service he said, "Our capabilities are sufficient to satisfy any request that meets the conditions, thus reducing the pressure on the international exchange, even if the requests came from all the customers in Kuwait."

## Direct Dialing Phones Are Eavesdropping Free

At the end of the discussion he asserted that it is impossible for the user of the direct dialing phone to experience what the users of car phones experienced; namely, picking up phone conversations over the radio. He added that the direct dialing telephone is not wireless and no instruments are available to pick it up.

With respect to car phones, the Ministry of Communications has made available certain equipment which is being installed and which will prevent eavesdropping on phone conversations by radios.

## A Modern System for Overseas Calls

The modern system for phone service realizes a number of gains to customers. In addition to allowing the customer to call any country in the world with no hinderance and in a direct and immediate manner, it also provides this modern service at a lower cost whereby the customer is charged by minute rather than by the call (3 minutes). This, in addition to its reliance upon an accurate accounting system as a result of the use of electronic equipment.

## Conditions To Benefit From the New System

The Ministry of Communications has set certain conditions for the use of the direct dialing system that must be met prior to approving customer application.

Among these conditions are:

--Payment of a deposit of 1,000 dinars or offering a collateral in that amount.

--Payment of all telephone due bills prior to connecting the service.

--Customer responsibility for all outside calls charged to his phone number.

--Payment of all due bills which will be itemized within 15 days upon the request of the Ministry of Communications.

--Payment of 50 dinars to reinstall the service in the event it was discontinued by the ministry. The customer has the right to request charges of each call made at the end of that call but a fee of 100 fils will be added to the charges.

The customer can request that the direct dialing service be discontinued temporarily and a fee of 2 dinars will be charged if the service is requested again.

#### Direct Telephone Dialing

The new system of overseas communication through the direct phone dialing between customers in Kuwait and other countries that possess this system is considered among the most modern in the world. Beginning in September it will allow the customer to call whomever he wishes in each of Iraq, Bahrain, Qatar, United Arab Emirates, Britain, and Japan. During the first half of September communications will become possible with West Germany, Switzerland, Greece, Spain, Italy, and the United States. As for the other nations of the world, direct communications with them will be arranged with each consecutively as soon as the necessary technical capabilities become available to each of them.

#### How To Call the World?

Regarding the manner by which to call a nation in the world through direct phone dialing, it is as follows: The customer dials (00) to connect with the international exchange at the central building in Kuwait of the wire and wireless communications. He then dials the number for the country he is calling, followed by the number of the city in that country and finally the number of the customer in that city. If the customer wishes to obtain charges information at the end of his call he should dial (09) instead of (00).

#### Numbers of the First Stage Nations

The international numbers of states that could be dialed directly beginning next September are as follows: Iraq, 964; Bahrain, 973; Qatar, 974; Britain, 44; Japan, 81; Spain, 34; Italy, 39; United Arab Emirates (Abu Dhabi), 979; United Arab Emirates (Dubayy), 962; West Germany, 49; Switzerland, 41; and United States, 01.

#### Advice to Customers

Customers are advised of the necessity to be sure of the number of the country or city and of the number of the party before dialing the overseas call. Also they should be sure that the dialing begins with the number (00) or (09) in order to connect with the international exchange. The customer is also to guard his phone against misuse as he is responsible for charges of each call made over his telephone.

#### Direct Dialing for the Elite or the Masses?

One final point remains before concluding this discussion on the topic of direct telephone dialing. It is that the requirement of 1,000 dinar deposit is an exaggerated figure. It is a condition which will prevent thousands of customers from benefiting from this modern service and the benefit is limited to the able few. If the use of this service by all or most customers is to inconvenience the few, we would say that the inflated amount of the deposit is justifiable. But communication technicians have testified that the equipment possesses wide capabilities for meeting all the demand and that it will make it simpler for the employees of the international exchange to perform their duties more effectively [if the equipment is utilized to the extent of its capacity].

Will then the matter of deposit be reviewed and be reduced to make it within the means of the various segments of the population?

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CSO: 5500



LEBANON

# LEBANESE PHONE DIFFICULTIES DISCUSSED

Beirut L'ORIENT LE JOUR in French 17 Sep 77 p 2

[Article: "The Telephone: Jubayl Residents Complain About Their Isolation"]

[Text] The wave of protest against the poor operation of the telephone network is growing day by day. Newspapers and news agencies are literally swamped with letters coming from Beirut and from various areas of the province, which are asking that some steps be taken in order to correct this state of affairs.

Yesterday, an open letter from the Jubayl residents was sent to the minister of Communications, Mr Farid Raphael, asking him to "put an end to the telephonic isolation of this region, if possible on the occasion of the first anniversary of President Elias Sarkis' inauguration".

Here are a few excerpts from this letter which has been published by the "Souhoufia" agency:

"The telephone lines linking the Jubayl exchange to Juniyah one, and designed to insure outward connections, that is to say contacts between Jubayl and other Lebanese regions, are totally out of service. After consulting with technical personnel in charge at the Jubayl exchange, it turned out that the breakdown has been occurring at the Juniyah exchange for several months, and that it was resulting from the stoppage of the air conditioning system as much at the Juniyah exchange as at the one in Jubayl.

The Juniyah exchange technicians refuse to proceed with their work on account of the unbearable heat prevailing on the premises and which sometimes reaches 50 degrees. We were surprised to learn, Mister Minister, that these technicians had informed the telephone authorities of this situation since the beginning of last month of June and that they have not yet received any answer. This being so, it appears that the breakdown in the Juniyah center has been localized in the line section known under the 'FDR' designation. We are hoping, that you will take steps in order to bring the telephonic isolation of the Jubayl region to an end, on the occasion of the first anniversary of President Elias Sarkis' inauguration."

LEBANON

BRIEFS

PM RECEIVES BBC OFFICIAL--Prime minister Dr Salim al-Huss today received the BBC's Arabic section director, David (Berman). Information Ministry Director General Dr Charles Rizo and ministry adviser Radwan Mawlawi attended the meeting. The discussions during the meeting dealt with the relations, cooperation and exchange of programs between the Lebanese Radio and the BBC. A meeting was then held with the Lebanese Radio director, Kazim al-Haj 'Ali. The details of the cooperation plan and the exchange of various radio programs and material between the two radios were studied during the meeting. [Text] [Beirut Domestic Service in Arabic 2200 GMT 22 Oct 77 NC]

CSO: 5500

MOROCCO

BRIEFS

AGADIR BROADCASTS INTERRUPTED--This is to inform listeners in the Agadir area that in view of the work being carried out on the transmitter center in Ayat Mallul, radio transmissions on 251 meters, 11902 KHZ--devoted to French, Spanish and English programs--will cease to operate as of today until 15 November. Listeners in the same area are also informed that in view of the work being carried out at Ayat Mallul transmitting station, broadcasting of our programs on the national frequency of 321 meters, 935 KHZ, will cease daily between 0500 and 1245 [GMT] until 29 October. [Rabat Domestic Service in Arabic 2000 GMT 17 Oct 77 LD]

CSO: 5500

QATAR

#### QATAR TO BUILD NEW RADIO STATIONS

Doha GNA in Arabic 0745 GMT 22 Oct 77 NC

[Text] Doha, 22 Oct--A new Qatari radio transmitting station will be built by next year in al-Khisah area near Doha at a cost of about 22 million Qatari riyals.

'Abd al-Rahman al-Mu'addawi, the director of Qatari radio, has stated that a new 10-kilowatt FM station has been built in al-Khisah and that another 250-kilowatt shortwave station will be built next year. The transmissions of this station will be beamed to Europe and North Africa. He said that a third 100-kilowatt station will also be built in the same area, in addition to two 5-kilowatt stations for local broadcasts.

In a statement to the QNA correspondent, al-Mu'addawi said that a new 750-kilowatt transmitter has arrived in Doha. It will be broadcasting simultaneously with the al-'Arish transmitting station. He added that an FM antenna, which currently covers part of the Gulf area, will be installed to cover the whole area.

He noted that work has begun for the construction of a new broadcasting house, which will consist of four stories and eight studios, one of which will have a stage, near the present radio building. He said that the new building, which will be completed within the next 2 years, will cost 32 million Qatari riyals. He said that the present radio building will house the facilities for English, Urdu and Persian beamed broadcasts in addition to the popular broadcast [Al-'Idha'ah Ash-Sha'biyah].

The Qatari radio director concluded his statement by emphasizing that an automation system in the Qatari radio studios will be introduced next year.

CSO: 5500

USSR

MOLNIYA-3 COMMUNICATION SATELLITE LAUNCHED

LD281315Y Moscow TASS in English 1245 GMT 28 Oct 77 LD

[Text] Moscow, October 26 TASS--Under the programme of development of communications systems with the use of earth's artificial satellites, the Molniya-3 communications satellite was launched today in the Soviet Union on a high elliptic orbit. The satellite carries onboard relay equipment operating in the centimetre wave length. It is meant for ensuring functioning of a long-range television, telegraph and radio communications system in the Soviet Union, for beaming programmes of the USSR Central Television on points in the Orbita network and for international cooperation.

The satellite was put into an orbit with the apogee of 40,764 kilometres in the Northern Hemisphere and the perigee of 478 kilometres in the Southern Hemisphere. The period of the sputnik's revolution is 12 hours 15 minutes. Inclination of the orbit is 62.8 degrees. [Moscow TASS International Service in Russian at 1234 GMT repeats all orbital figures verbatim] Besides the equipment for relaying TV programmes and ensuring long-range multi-channel radio communication, the satellite carries equipment of the control complex, as well as systems of orientation, correction of the orbit and energy supply.

CSO: 5500

USSR

BRIEFS

LATVIAN RADIO, TV TOWER--[From SEL'SKAYA ZHIZN' and TASS correspondents roundup: "New Television Tower"] Riga--A 300-meter radio and television tower designed by Moscow specialists for the capital of Latvia will replace the present transmitting station. Thanks to this, the reception quality will be considerably improved and the number of radio and television programs will increase. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 Sep 77 p 1 LD]

TV COVER IN TURKMENISTAN--[TURKMENINFORM report: "Television Bridge in the Desert"] The report by Comrade L. I. Brezhnev, general secretary of the CPSU Central Committee and chairman of the USSR Supreme Soviet Presidium, at the USSR Supreme Soviet session was the first direct television broadcast to be seen by tens of thousands of inhabitants of Tedzhenskiy and Serakhskiy rayons. A new section of radio relay line in the Karakumy has begun operating here. By commissioning all installations ahead of schedule construction workers of the Republic's Ministry of Communications and Ministry of Rural Construction have fulfilled their pledge adopted in honor of the session of the country's supreme organ of state power which will adopt the new USSR constitution. Television screens will light up for the first time in many villages of Turkmenistan before the end of the year. [Text] [Ashkhabad TURKMENSKAYA ISKRA in Russian 5 Oct 77 p 2 LD]

ORBITA COMMUNICATIONS STATION--An Orbita-2 space communications station has begun to operate in the mountains of Armenia. This complex receiving and transmitting center with a 12-meter reflector, designed for tracking communications satellites, has been handed over by the builders 1 month ahead of schedule. The orbita station in Armenia is the first one in the Transcaucasus. With its commissioning, reception of the central [Moscow] television's fourth program in color and additional programs in the future will become possible. It will also be used for telephone communications between Yerevan and Moscow. [Text] [Moscow Domestic Service in Russian 0900 GMT 11 Oct 77 LD]

NEW TELEVISION TOWER--Vilnius--A 326-meter television tower has been assembled. It is the highest structure in Lithuania and forms part of a complex designed for three television and four radio channels. The aerial was assembled in stages inside a reinforced-concrete column and then gradually pushed upward. The Vilnius tower will serve as a model for similar constructions in Tallinn, Sverdlovsk, Baku and other cities. [Moscow Domestic Service in Russian 0700 GMT 22 Oct 77 LD]

SATELLITE TV FOR TORGO--The settlement of Torgo, on the BAM [Baykal-Amur Main Line] route, has begun to receive television programs from Moscow. It is the second populated point in the Yakut ASSR to receive central television programs with the aid of the "Ekran" satellite. [Moscow Domestic Service in Russian 1030 GMT 24 Oct 77 LD]

CSO: 5500

## INTERNATIONAL AFFAIRS

### LM ERICSSON CONCERN TO MODERNIZE AUSTRALIA'S TELECOMMUNICATIONS

#### Order's Public Relations Value

Stockholm DAGENS NYHETER in Swedish 14 Sep 77 p 26

[Article by Alf Norrman: "LM Receives Record Order. New Customers Waiting"]

[Text] LM Ericsson will be the one responsible for the modernization of Australia's telecommunications network. That country's communications minister, Eric Robinson, reported Tuesday that at the recommendation of the state telephone company Telecom Australia his government had selected LM's computerized AXE exchange system.

The decision will bring orders in the billion range for LM Ericsson in the 80 and 90s. But up to 80 percent of construction will be shifted to Australia. There is no current talk of new investments or employment opportunities in Sweden. But the LM concern's profits will increase. This at least is what Tuesday's buyers expected at the Stockholm stock exchange, where the company's stocks sold for 14 kronor more than the day before.

-- But the most important thing in all this is, after all, its public relations value.

That is what LM Ericsson's information chief, Nils Tengberg, tells DAGENS NYHETER.

Tengberg points out that the Australian experts put 20,000 man-hours into testing AXE system.

-- The peoples at Telecom Australia are known to be both skillful and decisive. Now that they have made up their minds, their decision will have an effect on decision-makers in other countries too, he thinks.

Director Tengberg sorts through the business involving the AXE system which is "in the air" right now.



-- Saudi Arabia. Here LM went in this spring together with the Netherlands' Philips on a tender for the expansion of the country's entire telephone system.

Tengberg refuses to specify a total sum. But there has been speculation that the expansion may total 20 billion kronor.

Among its competitors in this are the American ITT and the West German Siemens, number 1 and number 2 in the world in telephone business.

ITT is among the companies which LM has now beaten in competition in Australia. In the final round there were only LM and the U.S. company.

-- The Netherlands. The government here is expected to come to a decision in the fall. The tender which LM entered was, exactly as in Australia, for the modernization of the country's entire telephone network.

So first there must be a decision which broadly speaking only involves the choice of a system. After that there are orders in the multibillion class, stretching over several decades.

According to the information which LM's management now has, ITT and Siemens are supposedly already beaten. LM and the home-country company Philips are still in the running.

-- Iran. Here, as in Saudi Arabia, we are dealing with an oil-rich but underdeveloped country which is to build up an entire telecommunications system.

Orders, then, in the multibillion class which the major companies will compete for. But the government has still not issued a call for tenders.

It is not yet possible to say in greater detail what the Australian Government decision involves. LM Ericsson considers the accepted tender a framework agreement, a choice of system.

-- We will immediately enter negotiations with Telecom Australia, says Tengberg. It has been 2 years since we delivered the offer, and today we do not know exactly what they want from us.

One of the big question marks is whether construction will take place under LM's own control or under license.

But if LM manufactures it itself, that will be done in Australia. In LM's daughter company, which will in that case require large investments.

-- At first everything will be manufactured in Sweden. Afterwards construction will gradually be expanded in Australia, says Tengberg.

At least 80 percent of the construction will be shifted there, he thinks.

The construction in Sweden will not bring any new investments in Sweden.

-- We already have the capacity required, director Tengberg says.

The 1650 people --750 in Norrkoepping, 150 in Aelvsjoe south Stockholm, 650 in Oestersund and 75 in Karlstad -- who are presently working on the electronic exchange system, should suffice, he thinks.

Other LM plants in Sweden will not be involved. More conventional exchanges are manufactured there.

The size of the order is another question mark. The news cable from Australia spoke Tuesday of 500 million Australian dollars - a mere 2.5 billion kronor.

-- I think the sum seems unrealistic, says Tengberg.

He thinks that between half a billion and a billion dollars sound more realistic.

-- In addition we should remember that we are speaking of orders which are spread out over both the 80s and 90s, Tengberg says.

#### Background

The AXE system was developed by the semi-state development company Ellementel. Since 1972, LM Ericsson and Televerket (the Swedish Telecommunications Administration) have together invested half a million kronor.

LM was responsible for 80 percent of the costs, Televerket for 20.

The first electronic exchange was inaugurated in Soedertaelje in the spring. Station number 2 is now being installed on the Aland islands.

Televerket has ordered or will order 14 stations from LM. This has been promised by the government, in order to stimulate employment.

But otherwise it is probable that Televerket will build its own AXE stations, when the time also comes to modernize the Swedish telecommunications network.

LM's hopes are therefore abroad.

There, LM Ericsson has already received orders for three stations in France and one in Yugoslavia.

Yugoslavia is to modernize its entire telecommunications network with AXE stations. But the stations are to be built under license in Yugoslavia.

According to the latest available figures LM Ericsson has 84,000 employees. Only 30,000 of these work in Sweden.

#### French Court Examines LM Ericsson

The French Stock Exchange Commission called Tuesday for court examinations of LM Ericsson's French daughter company. The case has been passed to the state prosecutor. As part of the rebuilding of the French telephone network, the company recently became a daughter company of the French Thompson-Brandt group.

The attention of the commission was particularly directed to a loss of 50 million kronor in the first half of 1976, which led to the investigation of the accounts for previous years. The commission particularly noted the closing accounts for 1975 which showed a profit of 20 million kronor. The results for 1973, 74 and 75 were reported in different ways and could therefore not be compared, the commission maintains.

Director Nils Tengberg at LM said Tuesday that the whole thing came about because the company had switched its method of billing. The new method was gradually introduced in France during recent years on the advice of the company's French accountants, who maintained that the method was in accordance with French practice even if it was not supported by the law.

#### Hope for Employees

Stockholm DAGENS NYHETER in Swedish 14 Sep 77 p 26

[Article by Agneta Carlsson]

[Text] The giant order will be important to LM Ericsson in Olofstroem, in the event that the electronic system which Australia has ordered is produced at the LM Ericsson plant which is already doing such production.

So says Mats Joensson, the chairman of the workshop club at LM Ericsson in Olofstroem.

-- Already now we have a certain movement of production within LM, so the thought is not unreasonable. But it is naturally hard to say today whether it will happen. The concern could just as well move the electronics construction abroad, Mats Joensson concludes.

The chairman of SIF club at LM Ericsson in Stockholm, Paul Kvamme, believes that the Australian order ensures jobs for the employees in Sweden.

-- We are dealing with such a complex system that the technical management must stay in Sweden. It cannot be moved abroad. The question will probably arise as to whether this management will have to be expanded, so that more work will be created.

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FRANCE

STATUS OF TELECOMPUTER TECHNOLOGY VIEWED

Paris MESSAGES DES POSTES ET TELECOMMUNICATIONS in French Sep 77 pp 4-7

[Text] SICOB 77 [International Exhibition of Computer, Communications, and Office Equipment] is opening its doors. As it does every year, the PTT [Postal and Telecommunications Administration] is presenting a sample of its recent or future products. Among the latter, the public can make the acquaintance of Transpac, a public data transmission system, which will become operative in June 1978. Transpac, whose technique has been approved by our fellow members in the EEC, is the result of the efforts made by the telecommunications directorate [DGT] in the area of telecomputing, in order to satisfy the needs of the French economy.

"I should like to reserve two second class seats on the train from Paris to La Rochelle, leaving Friday at 0800."

"That's very easy. Would you prefer a non-smoking compartment? Would you like a window or a corridor seat?"

The SNCF [French National Railroads] employee in charge of reservations transcribes the information received from the "travel applicant" on a machine that resembles a typewriter. Then he places a preprinted card, with blank spaces, above the keyboard. There is a short wait and then, as if an invisible hand were striking the keys, the machine crackles and writes on the card the numbers of the reserved seats.

This transaction, which will be commonplace in the future and which already no longer amazes the public, is one of the many applications of telecomputing. As its name indicates, telecomputing covers the range of methods that make it possible to "do" long-distance computing. It appeared in France around 1965, and is the result of the union of telecommunications with computing. It thus combines two major operations: data processing (its computing side) and data transfer (its telecommunication side).

Data processing is the job of the computer. The computer is capable of recording a considerable volume of input data and then of transforming it according to a predetermined program in order to deliver a new piece of information, the "output." Computer technology gives these machines astonishing capabilities, such as storage capacity, speed of access to information, and speed in the execution of programs. In order to talk to the computer, so-called peripheral equipment is used. In telecomputing, this is called a "terminal." For example, one can transmit a piece of information to the computer by means of a console and receive the reply by means of a printer or a television screen. The printer is preferable when the user wants to have a written record of the information, which is then delivered at very high speed, most often on huge sheets of accordion-pleated paper, called a "listing." Computing, as we know, has taken on great importance in the organization of industry and the economic life of the country.

#### Free of Distance and Time

But it is fairly rare for the production of data, its processing, and the use of the output data to take place in the same locality. Distance and consequently time have been obstacles to the development of the use of computers. Take the case of a company that has its headquarters in Paris, its computing center in Orleans, and its factory and salesrooms all over the country. The computer of course will process data with its usual speed, but how much time will it take to collect all the data at the computing center and then to transmit the output data to headquarters? Probably one to several days, depending on the method of transportation or the system used. Thus it was necessary to give data processing systems a means of communicating with each other that would be up to the level of their performance. Telecommunications technology has supplied this means, explains M<sup>r</sup> Philippe Picard, chief engineer at the "telecomputing and special systems" subdirectorate of the DGT:

"Telecommunications technology makes it possible to shake off the obstacles of distance and time. The continual extension of the telecommunications system and the technical progress in transmission and commutation have enabled us to meet the needs of the new type of traffic composed of data transmission."

#### Arranging the Territory

By putting the computer within the reach of distant sites, telecomputing has opened the door to new uses for computers, facilitated industrial management, and offered prospects for a policy of territorial arrangement. Thus it is not surprising to observe a spectacular increase in telecomputing, which can be measured by the number of terminals connected to data transmission lines. In France, this number increased by 50 to 100 percent each year up to 1973. And its growth, which is presently of the order of 35 percent, should continue steadily until it stabilizes at around 15 percent in 1985. Moreover, there is a similar development in the principal European

countries. A great diversification of the market is also observed. If the speed of transmission of terminal installations is used as a reference, there is a general trend toward higher rates. These needs have guided DGT policy in the area of data transmission.

"In the beginning," recalls M Picard, "these needs were very marginal. It was unreasonable to create a special system. Therefore we tried to use as well as possible the infrastructure set up for the telephone system and the telex system. Then because the need became greater and more varied, and also because the characteristics of the traffic are different from those of the telephone, we introduced one by one a certain number of special services."

So in the beginning, telecomputing used the telephone and telex systems, which had the advantage of already being in existence.

#### Using the Telephone

The use of a telephone line requires an adaptation for data transmission. The signal produced by a teleprinter, a computer, or a terminal is actually a series of electric signals having two possible values: 0 or 1. The unit of this electric signal is called the "bit"<sup>1</sup>. The signal is composed of bit sequences transmitted at a regular rate. The transmission speed is therefore expressed in bits per second. But it is difficult to transmit this signal as it is over an ordinary line, except for short distances<sup>2</sup>, because it is rapidly weakened and distorted. That is why it is transformed into an analog signal like speech. This operation takes place in a converter. One converter at the transmitting end to modulate the signal produced by the computing equipment and another converter at the receiving end to restore the original signal are sufficient to do telecomputing over an ordinary commercial telephone line.

This system is advantageous for limited amounts of information transmitted at limited rates, and for local connections which are not charged by the minute. For example, many pharmacists will soon be able to use a small terminal every evening to order the medicines they need. At the other end of the telephone line, the computer processes all the orders, making the procedure easier and safer to manage.

However, the nature of the line between the telephone exchange and the subscriber, and the commutation system, do not allow high levels of performance. The transmission speed cannot be much greater than 2400 bits per second. Noise, which is a simple nuisance in telephony, is a source of error in telecomputing. The use of special connections or permanent links between two or more installations, borrowed from the general infrastructure of the telephone system, makes it possible to reduce some of these constraints. Nevertheless, the peculiarities and the changes in the needs of telecomputing led the DGT to introduce special services.

Thus in 1969 the commutated telex system, which had previously operated

only at the speed of 50 bauds, was opened to 200 baud traffic.

In 1971 the DGT provided special long distance connections permitting rates of 48,000, 64,000, or 72,000 bits per second. For this purpose, the long distance part of these connections occupies the complete pass-band of a primary group--that is, the equivalent of 12 telephone channels.

#### The Caducee System

Then in 1972 the commutated Caducee system was introduced. This is a system that uses the telephone circuit commutation, but it is adapted and reserved for data transmission. It allows the transmission of 9600 bits per second. Banks are among the major users of Caducee. The most frequent use is as follows: as transactions take place during the day, they are recorded on a magnetic tape. In the evening the office calls the central computer by means of Caducee, and the information contained on the tape is transmitted at 4800 or 9600 bits per second. In return the computer sends a listing with the balances of the accounts and the updating of the files. This type of operation is less expensive than the use of a special connection.

#### Transplex

Finally in 1973 the DGT commercialized the Transplex service. The origin of Transplex was a problem posed by the Credit Lyonnais bank. It was necessary to connect all the offices in southeastern France with the computing center located at Rillieux near Lyons. There are many of these offices in the Lyons regions but there are also many in the area of Marseilles and Nice. For the normal solution of special lines, it would have been necessary to construct about 30 lines on the route between Lyons and Marseilles; these lines would then be distributed among the offices.

Since the data are transmitted at the relatively low speed of 600 bits per second, the lines would have been "underused." The idea proposed was to use the technique of numerical multiplexing<sup>3</sup> in order to make these low speed channels pass simultaneously on one or a small number of 4800 bits per second channels. In the present case, this technique made it possible to divide the number of circuits between Marseilles and Lyons by eight. The multiplexers are installed in the centers of the telecommunications directorate of the national system [DTRN]. The Credit Lyonnais experiment has been greatly extended, since the Transplex system now contains more than 40 access points distributed throughout France.

#### Transpac

With high speed special connections, the commutated Caducee system, then Transplex, the DGT gradually entered the field of telecomputing. But now it is making a real leap forward with the introduction of the Transpac system in June 1978.



"The launch of Caducee helped us to know our business, not only on the technical level, but also in marketing. This is what made it possible for us to create Transpac, for telecomputing is a competitive field in which the time factor is essential. It was important not to get behind for two reasons: first, in order to have an industry that could compete with other countries; and then, because if we had not been capable of doing it, the need for data transmission would have been met by private systems created by the largest companies."

At first, Transpac required a great effort for standardization. In a telephone system, the PTT provides everything, including the telephone itself; in telecomputing, it never supplies the terminal equipment. Whence, the necessity of establishing a limit and standards. This job was especially difficult because specialists in two fields--telecommunications and computing--had to be brought into agreement, although their interests and working and thinking methods are different. Moreover, it was unthinkable to define a purely French standard, for computing companies are in the habit of working on the international level, and because it was advantageous to be able to offer international data transmission services. Here again it was necessary to act quickly, because the CCITT [International Consultative Telephone and Telegraph Committee] has a plenary meeting every four years. If the October 1976 meeting had been missed, the operation would have been jeopardized.

"A team of qualified persons began to consider the problem of standardization at the beginning of 1975, and visited many countries like the United States, Canada, and Japan in order to arrive at a consensus. The achievement of this team is even greater in view of the fact that certain groups were not in favor of a standardization. But their efforts were recompensed by the official approval of standard X-25, presented by France, at the CCITT meeting last October."

Gratifications never come singly, and the action performed with Transpac has just received the support of our European partners. Since the EEC had decided to create a scientific and technical data system called Euronet, it was appropriate to have a transmission system to give access to the data. The EEC entrusted the production of such a system to a consortium of the PTT agencies of the member states. The system chosen after consultation among the European countries is practically identical to Transpac.

#### A Finished Product

Thanks to the technique of commutation by packets (see below) Transpac offers an efficient, reliable and economical transmission method. Transpac makes it possible to connect various pieces of equipment operating at different speeds. In this case, the Transpac system itself takes care of the speed conversion. In addition to Transpac, the DGT is working on the introduction of high speed numerical connections which will be used for telecomputing but also for high speed telecopying (press facsimiles) or for videoconference connections.

"It is part of the PTT's job," explains M Picard, "to provide raw materials in the form of transmission equipment. But should we be satisfied with setting up and using these raw materials while letting others take advantage of them to make a finished product, or should we on the contrary make the finished product ourselves? If a perfected product is offered in the case of numerical connections, Transpac is clearly a finished product with considerable added value."

"Will the policy of the DGT be the same for domestic telecomputing?"

"We have some plans but before pursuing them we must find out whether the public really needs them. It was different in the case of Transpac because the market already existed. If we had not satisfied the demand, others would have done it instead, and we would have been only the providers of the raw materials."

#### Data Transmission by Packets

In the Transpac system data sequences coming from a terminal or computer are cut up into fairly short sections called packets; these packets are accompanied by headings which identify them so that they can be directed to the chosen destination.

The packets are ready to be taken over by a transmission system equipped with commutators--computers capable of recognizing the presence of a packet, examining the headings contained in each packet, detecting possible errors in transmission, and pointing the packets toward the right path--and high speed transmission lines connecting the commutators.

It can easily be imagined that packets from different sources can thus be reordered behind one another on the internal connections of the system; the transmission arteries are used to their maximum capacity and each data sequence uses that fraction of the total capacity of the artery that is necessary for it.

Once they arrive at their destination, the packets are "freed" from their headings and their messages are thus automatically restored.

#### The PTT and SICOB

SICOB will be held, as it is every year, at the exhibition hall of the National Center for Industry and Technology [CNIT] at Puteaux (Hauts-de-Seine). The exhibit will be open from Wednesday 21 September 1977 to Friday 30 September, with the exception of Sunday 25 September, when it will be closed all day. The first three days--Wednesday 21, Thursday 22, and Friday 23 September--are reserved for professional visitors. Thus the public can see the PTT stand on Saturday 24 September, and then from Monday 26 to Friday 30 September. To get there, you can take the metro (RER), the train (Saint-Lazare station) or the bus (lines 73 and 174). The PTT stand will be located on the third level in zone F. Exhibition

panels, brochures, and illuminated displays will present the services presently offered as well as the objectives endorsed by the minister of the PTT. Attendants will explain the material presented to visitors.

Obviously the telecomputing and special systems subdirectorates [TRS] of the DGT will have the place of honor. In particular, it will present the audiographic teleconference system, which makes it possible for several groups of people located in different cities to participate in the same meeting, thus enabling them to avoid long trips. Other things than can be explained include the advantages of the future Transpac telecomputing system, the facilities of the Tictac system (an integrated terminal including a television set and a push-button telephone), and the projects of the STT section in the area of touristic telecomputing. But the public will also be informed of the efforts made to develop the telephone system, especially production, automation, the quality of service, public phone booths and automatic international traffic. The public can also become familiar with Eurosignal, the system for contacting persons on a trip, which is intended to cover all the countries of western Europe; simple telephone answering services and recorders, which can be rented on particularly attractive terms; new push-button and color telephones, and the Contempra telecopiers which rapidly transmit documents by means of the telephone system; the telex, one of the best methods of communication for the commercial sphere; and finally, the new telephone book composed by photo offset processes.

In addition, the effort to modernize the postal directorate will be illustrated by panels and photographs. Demonstrations will be performed with recent and little known equipment. Thus, the public will see the operation of a mail sorting machine, the prototype of GAPA [Automatic Stamp Machine], an automatic ticket vendor, and a printer that continually puts out "mailers," those new envelopes coming from across the Atlantic, which are frequently used by the Treasury. The visitor will be advised on the best method of presenting his mail and he will learn about the new facilities for insured packages. Finally, the businessman will be able to learn about the advantages of the various products offered by the money order system, including the exchange of magnetic tapes, the optical letter check, the automatic withdrawal, and the letter of credit.

#### Information

For additional information, contact one of the following addresses:  
Commercial Agency for Telecomputing and Special Systems [ACTRS], 32  
boulevard de Vaugirand, 75731 Paris Cedex 15, telephone (1)-551-63-11;  
Center for Promotion of Telecomputing, 8 boulevard de Vaugirard, 75738  
Paris Cedex 15, telephone (1)-567-70-97.

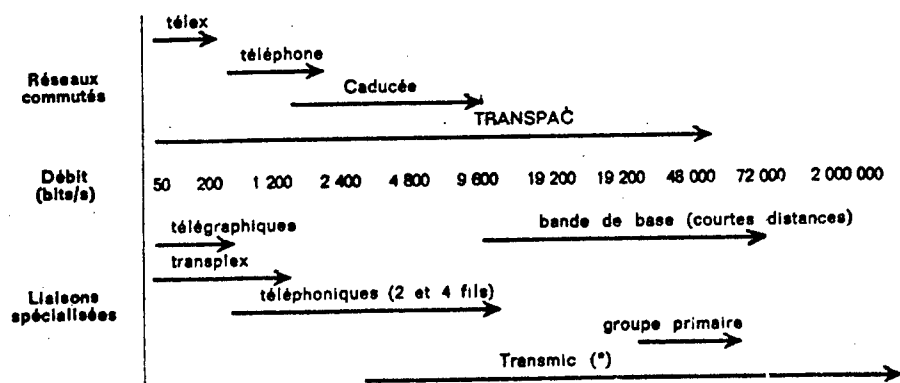


Figure 1. Services offered by telecomputing. Top: commutated systems--telex, telephone, Caducée, Transpac. Center: rate (bits per second). Bottom: special connections--telegraphic, Transplex, telephonic (2 and 4 wires), fundamental band (short distances), primary group, Transmic (experimental service with numerical special connections).

#### FOOTNOTES

1. In telegraphy, the word "moment" is used, and the transmission speed is counted in bauds. A speed of 50 bauds corresponds to the transmission of 50 moments per second.
2. In this case, the so-called "fundamental band" technique is used.
3. Numerical multiplexing is a special technique which makes it possible for several data transmission channels to pass over a single faster channel with no loss of information or risk of blocking. It is also used in numerical telephony.

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## FRANCE

### EUROSIGNAL SYSTEM CONTINUES NATIONAL EXPANSION

Paris MESSAGES DES POSTES ET TELECOMMUNICATIONS in French Sep 77 pp 11-12

[Text] Preceded at the end of 1975 by the official opening of the first network for northern France, the introduction a few weeks ago of the eastern zone, soon to be followed by the east central and southeast zones, offers a considerable advantage for the Eurosignal paging system. The extension of the network to cover all of France will take place gradually between now and 1980, a period in which other European countries will probably follow the example of France and the FRG. In France itself the potential market has been estimated at more than 80,000 receivers. The essential problem is to make this new technique known.

It is often necessary to reach a person who is traveling. Wouldn't a company want to inform its deliverymen or its repairmen that a change has been made in the route of a previously planned trip? Wouldn't a doctor feel reassured if there were a method of calling him in case of an emergency at his home? The radio telephone (see MESSAGES No 253 Feb 77) can provide solutions to most of these problems. But in many cases such equipment, which is relatively expensive for an individual, is not justified. It would be sufficient for the person being paged to receive a simple signal to which the caller and the person being called had previously given a particular meaning.

"This is the principle of the Eurosignal system," explains M Jacques Guillot, section chief at the Directorate for Commercial Affairs of the General Directorate for Telecommunications, "with the understanding of course that such a procedure does not allow a reply, much less a conversation. Thus the receiver, which simply acts as a recorder, can be much smaller. Designed to be used either in a vehicle, in which case it makes use of the outside antenna, or in a pocket or a handbag, the receiver is powered by the automobile battery or by a little independent storage battery built into the instrument."

Beep Beep

In order to alert a person who is traveling in a car or even on foot, one merely dials from any telephone a special call number in the usual form of a ten digit long distance number. This number includes the 00 or 01 which give access to the Eurosignal service, then an area code which differs according to the region in which the traveler is assumed to be located, and finally five figures representing the private number or code of the receiver to be called. If one is not sure in which region the traveler is located, one merely makes a second call to a neighboring region. Traveling through the telephone system, the call corresponding to the number composed arrives at a "base network" where it is recorded by a "paging exchange." Here a minicomputer makes various tests. If everything is in order, the normal telephone charge is billed to the account of the caller, who simultaneously hears a message: "Eurosignal, eastern France, call recorded." He can then hang up his receiver. At the same time, the paging exchange commands the emission of a radio signal which is simultaneously released from several transmitters, in order to guarantee good radio coverage. Obviously the simplicity of the system makes it impossible to check whether the call has been received.

"In order to receive the call," M Guillot continues, "the receiver must be in the 'wait' position and tuned to the right channel. So when one changes regions and thus base networks, one must also change channels. Anyway, it is impossible to forget this adjustment. An automatic alarm system, called an 'out of range' alarm, is triggered if one has not made the adjustment, and the carrier of the receiver cannot stop this alarm without correctly tuning his instrument. The receiver can be assigned one of four numbers, corresponding to an equivalent number of signal lights which can be turned off only manually. Thus in case the user has been momentarily away from the instrument and has not been able to hear the characteristic 'beep beep,' he is informed upon his return that he has been paged. He has only to take the action agreed upon with the caller, most often to return the call."

The operating principle of the instrument is very simple: while it is in the "wait" position, the instrument constantly compares the numbers emitted by the antennas of the Eurosignal network with the number or numbers which it has in its memory. In case these are identical, a sound signal lasting three to five seconds is emitted and then repeated thirty seconds later. At the same time the signal light corresponding to the code being called lights up. There is only one problem: the instrument cannot receive a signal if the signal is emitted at the very time when the carrier of the receiver is passing through a tunnel. It is for this reason that the call is repeated at intervals of thirty seconds.

"Nevertheless," concludes M Guillot, "the Eurosignal system is already an advantageous product for the client. It does not require installation, it can be carried everywhere, and the monthly fee is relatively modest.

Moreover, in addition to the recent opening of new reception zones, the imminence of national coverage and compatibility of the system among the European countries will allow considerable development of the system, especially in professional areas in which it is imperative to reconcile travel and communication."

#### Time and Money

"We are gaining both time and money. Before, we asked our repairmen to call us several times a day so that we could give them new instructions. Now the roles are reversed; there are no more unnecessary calls, because when a change in plans is necessary we give them a signal to contact us."

M Christian Barrier is a commercial engineer in a large Parisian company, Idex Chauffage, which is located in Boulogne-Billancourt and specializes in the production and installation of heating and air-conditioning systems for large apartment complexes and public buildings. On the advice of a colleague, M Jean-Paul Lebras, an employee of the same company, he had his repairmen equipped with the Eurosignal equipment. For a year they have been using fifteen instruments every day, under conditions which M Lebras himself calls "a rough test."

"At first we had several breakdowns, and five instruments had to be exchanged. We don't whether they were faulty or poorly handled. Afterwards things settled down. Some instruments are mounted on the dashboards of the cars, but some employees prefer to have them always within reach. That is what complicates things because, since we often work three or four floors underground where the heating systems are installed, some calls never reach their destination.\*"

The net result however is definitely on the positive side.

"Each instrument is assigned a single number, and for the price of a radio-telephone we have equipped all our repairmen with a tool which is obviously useful. What more can we ask?"

#### Synonymous with an Emergency

"I became acquainted with the system through the trade journals. It provided a solution to a problem which has been my principal concern for a long time: reaching one of my principal co-workers, the head of the repair service, at any time and as quickly as possible." As technical director of the Alsatian Supermarket Company--one of the largest food wholesalers in the Strasbourg region, which supplies most of the supermarkets and large stores from Strasbourg to Paris with fruit, meat, and vegetables--M Leon Zaehring

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\*In such a case it would be better to leave the instrument in the car. Upon returning to the car, the repairman could see if a call had been received.

is especially responsible for the upkeep of all the preservation systems of the client stores.

"If there is a simple breakdown in the refrigerating equipment, tons of merchandise and millions of pennies are lost in a few hours. So it is necessary to contact the agent in the field as quickly as possible. But as you can imagine, he is a man who receives many calls, and sometimes he doesn't know about them. The receiver and the number assigned to the Eurosignal system constitute for us a privileged connection. When he is paged, it is a signal that an urgent repair is in view."

For several weeks the Strasburg company has had another Eurosignal receiver. It has been assigned to the technician in charge of the repair and maintenance of the company's electronic equipment. In this case as well, there can be no ambiguity. A call by day or by night is synonymous with an emergency.

#### The Cost of Eurosignal

The monthly subscription is 42 F per number. As for the rental and maintenance fee, it costs 160 F (without tax) per month for a receiver with one or two numbers, and 180 F for a receiver with three or four numbers. For the rental of more than two receivers, there is a sliding scale which gives a reduction of up to 20 percent.

Subscriptions are taken by the commercial telecommunications services like ordinary telephone subscriptions. Moreover it is not necessary to be a telephone subscriber in order to obtain the Eurosignal service.

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## FRANCE

### PTT'S SOCIAL ACTION POLICY DETAILED

Paris MESSAGES DES POSTES ET TELECOMMUNICATIONS in French Sep 77 pp 19-22

[Text] With an annual increase of 15 percent, the social action budget of the PTT [Postal and Telecommunications Administration] reached almost 451 million francs in 1976, or 2.94 percent of the company's payroll. In a period of two years, its total increase has been nearly 130 percent. In 1978 it will reach 600 million francs. More than three-quarters of the investment expenses (204 million francs) in 1976 were devoted to lodging, the remaining quarter being divided among the purchase and construction of buildings for social programs (an increase of 27 percent from 1975), equipment (+55 percent) and subsidies (+62 percent). Operating funds increased to 176 million francs.

#### Reception and Lodging of New Employees

In 1976 more than 18,000 new employees were engaged in the Paris region alone. This spectacular increase (+30 percent) cannot help but cause some difficulties. Efforts were essentially concentrated on the improvement of the briefing of the beginners previous to their hiring and on their reception the first day; the essential problem is to provide for their lodging on acceptable financial terms.

The compound with furnished quarters grew by 1600 places in one year, thus reaching a total of 13,100 places. However, these places are not equally comfortable. That is why a large renovation program has been undertaken; it affected 2300 places and was accompanied by the closing of the oldest quarters.

We point out that 9000 new employees have benefited from the employer's contribution to their lodging expenses (a maximum of 100 F per month for six months).

## Housing

Rental: the rental housing compound provided for the employees includes 47,600 apartments, of which 29,000 are located in the provinces.

In the Paris region, the total demand increased by 40 percent between 1975 and 1976 because of great pressure on the PLR-HLM [Low-cost Housing Program] units (+90 percent); 3900 of the 7350 requests were satisfied. This total number of grants is 200 less than the total for 1975.

Acquiring property: the total of 30 million francs devoted to this type of aid in the Paris region made it possible to grant 1118 loans at an average rate of 3 percent.

In the provinces, a sum of 15 million francs obtained under the exceptional social action program made it possible to notably increase the number of beneficiaries and the amount of loans, by the intermediary of the PTT credit union.

## Restaurants and Cooperative Stores

In 1976 twenty-one company restaurants, including ten in the provinces and eleven in the Paris region, opened. These new restaurants provide 2840 additional places, 1620 in the provinces and 1220 in the Paris region.

The 177 company restaurants served more than 24 million meals, of which 4 million were served to customers outside the PTT. This represents an increase of 1 million meals; it was essentially produced by PTT customers, for whom the average price of a meal after the refund is 5.50 F in the provinces and 5.80 F in the Paris region.

PTT employees took 1.2 million meals in inter-agency restaurants, and 550,000 meals in the 94 cafeterias and refectories. In addition to these establishments there are 924 refectories and 90 cafeterias which are not connected with a company restaurant.

The 80 cooperative stores saw their turnover increase by 20 percent, under the influence of price increases and increased sales.

## Health

Two new health examination centers were added to the 30 already in existence, while three additional agreements were signed between the PTT and the Social Security Administration in the provinces.

There are 99 infirmaries, including those at Rennes and Toulouse, which were created in 1976, and 75 first aid stations (in comparison with 41 in 1975).

The improvement in working conditions was especially evident in the

increase in the number of resting places (815 instead of 800) and recreation centers (132 as opposed to 130).

#### Aid to Employees

This area includes all the aid (moral or material) that is given to active or retired employees to help them to overcome the uncertainties of life.

Monetary aid: the budgetary readjustment obtained in 1976 made it possible to increase the maximum amount of an administrative loan from 2500 F to 4000 F and that of ordinary relief from 1000 F to 1500 F.

Around 1300 employees took advantage of the special allowance for classes in the mountains, at the seaside, or in the country. In addition, 30,000 tuition allowances and 23,000 vacation allowances were made.

Two thousand loans were granted to young couples, for a total of 9 million francs, while 6000 checks were addressed to employees in the armed services. Miscellaneous aid (aid to orphans, to unwed mothers, to invalids, and for the placement of handicapped children) amounted to 1.2 million francs.

We recall the creation of an administrative aid fund for retired persons who are living in family vacation homes.

Aid to employee organizations continued actively. It involved the attribution of new facilities in the form of equipment, premises, and personnel to the organizations. The amount of operating subsidies was also notably increased.

Social workers and social representatives: among the 262 social workers at work in 1976--one for every 1600 employees--57 were attached to the telecommunications directorate. Seventy-three of those who worked for the postal directorate actually helped employees of both branches.

The system of social representatives includes around 7000 employees, of whom 1000 are located in the Paris region. Their principal role is to relay information between the administration and the employees.

#### Child Care

The care of young children remains an area of concern to the extent that solutions are not offered by the community, on the national or local level. In order to relieve the difficulty of reserving a place in the public day nurseries (only 22 cribs have been attributed, increasing to 162 the number of places reserved in public day nurseries), it was decided to construct a company day nursery with a capacity of 60 places in Paris (Boulevard Brune).

The experiment of recruiting accredited attendants from among the wives of employees or female employees who are available, which was tried in the

Essonne department, gave encouraging results. Around 50 attendants were recruited in this way; they were able to care for around 60 children.

Administrative aid for the expense of caring for children less than three years of age increased from 7 F to 8 F a day, and it was extended to handicapped children of up to ten years of age. As for the day care of children from six to fourteen years of age on Wednesdays [when there is no school] and during short vacation periods, a new center was opened at Saint-Apollinaire near Dijon; meanwhile, two properties were acquired for the construction of day camps, one at Mornant in the Rhone department, the other at Montfermeil in the Paris region. Finally, aid for the placement of children in day camps not run by the PTT was increased from 8 F to 9 F per day.

#### Leisure and Vacations

Children's camps: in 1976, three new holiday camps were opened--Catus (Lot), Saint-Julien-Chapteuil (Haute-Loire), and Luc-en-Diois (Drome), which accommodated nearly 400 children from different regions. At the same time, the policy of dealing more extensively with other organizations and renovating leased quarters was pursued. Thus two new camps for teenagers were installed in quarters not belonging to the PTT at Matemale (Pyrenees-Orientales) and Bel-Air-Saint-Clement (Allier). Similarly, the Aynac camp in the Lot department made it possible for some teenagers from the Paris region to learn horseback riding. In the summer a decrease of 7 percent in the frequency of visits to the holiday camps was observed, but there was an increase of 25 percent for the teenagers' camps.

Family vacations: achievements in the area of family vacations are essentially due to the "PTT vacations" association, which builds and runs the 23 family vacation homes. In 1976 they accommodated 71,000 persons. An investment subsidy made it possible to construct the new Montricher-Albanne house, to acquire and arrange the Zoriona Hotel at Hendaye, and to make considerable improvements in the homes at La Londe-les-Maures, Hauteville-sur-Mer, and Frejus. A financing subsidy was paid to meet the interest on loans contracted for the construction of new establishments.

For its part, the PTT credit union opened its 5 vacation homes and its 2 family camps.

The allowance for the stay of children less than 16 years old in family vacation homes increased to 9.10 F per day.

Sports and leisure: In 1976 the 7th plan for sports equipment was put into effect. The total amount spent on programs planned with the ASPTT [PTT Employees] union is greater than 50 million francs. Gymnasias and multipurpose platforms have been built in the automatic sorting stations of the Paris region. Finally, action was undertaken on the spot to improve or make more comfortable the existing installations in various cities in the provinces (Limoges, Lyons, Brest, Poitiers, Lille, Grenoble, and Tours).

Seventy ski trips to eleven camps were organized by the ASPTT union for young employees from nine regions. Other trips to three camps were organized by the PTT credit union. Employee organizations (especially the ASPTT) also organized Wednesday ski trips for the children of employees.

Twenty ski camps operated during the winter. Improvements were made in half of them; the capacity of four chalets was increased: at Lelax (Ain), at Rousses (Jura), at Mont-Dore (Puy-de-Dome), and at Sainte-Eulalie (Ardeche).

The camps at Vallon Pont d'Arc (Ardeche), Villecresnes (Val-de-Marne), and Beaulieu-Ste-Assise (Seine-et-Marne) were also greatly extended. A new camp was purchased at La Couronne-Carro (Bouches-du-Rhone); its rearrangement will be completed in 1977.

Finally, sports equipment was improved in 47 cities. And 39 marinas are operating in 17 regions.

#### Statement of Norbert Segard on PTT Social Action Policy

"The social action budget, which amounted to 100 million francs in 1970, will reach 600 million francs in 1978.

This large budgetary increase is the expression of our desire to undertake a real social action policy within our administration.

I place great importance, as I have said on many occasions, on the development of an ambitious social action program.

It is only right for the great technical development and progress presently being experienced by the PTT also to have an effect on its employees, in order to make their social and professional introduction to the organization as easy as possible and to improve their living and working conditions.

The large budgetary resources I have been able to obtain for this area will make possible an increased effort, especially for housing and for the social facilities connected with places of employment.

The activities and efforts which have been undertaken will be pursued, both in areas that are more or less concerned with professional activities and in the areas of health, housing, and leisure activities; this social action policy should result in personal fulfillment in work for each of the employees under my direction. This remains one of the basic conditions for the proper operation of this great public service agency."

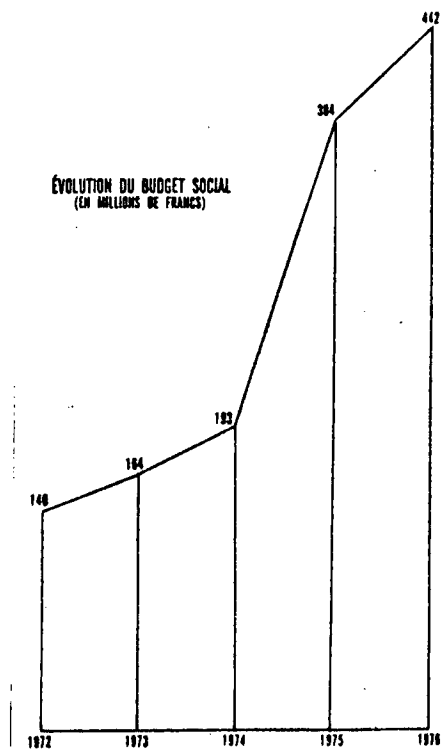


Figure 1. Increase in the social action budget (in millions of francs).

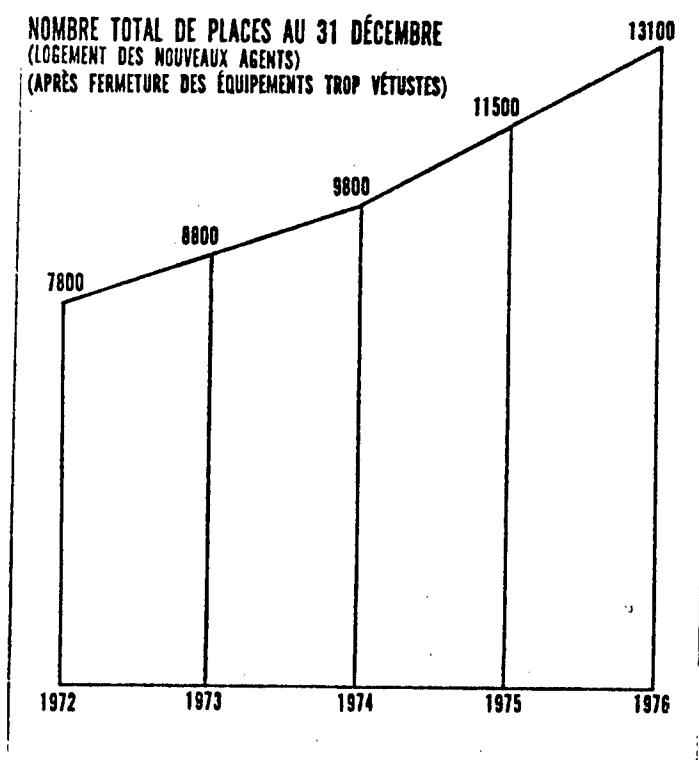


Figure 2. Total number of places for the lodging of new employees as of 31 December, after closing of the quarters that are too old.

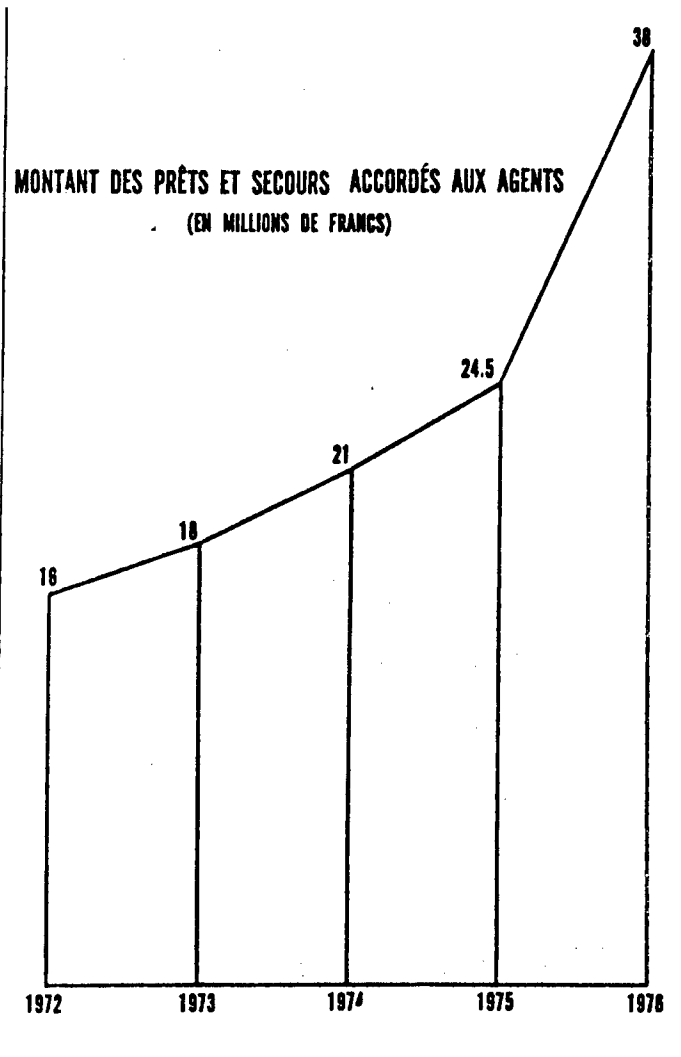


Figure 3. Total amount of loans and aid granted to employees (in millions of francs).

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GREECE

BRIEFS

TELECOMMUNICATIONS INDUSTRY--The charter for the establishment of a company to undertake the creation of an industry for the manufacture of electronic telecommunications equipment in Greece was signed today at ETVA [Hellenic Industrial Development Bank]. The company will be an incorporated company with a share capital of 400-million drachmas to be covered 55 percent by ETVA and 45 percent by OTE [Greek Telecommunications Organization]. The charter that was signed today implements Prime Minister Karamanlis' promise for the establishment of an industry for telecommunications equipment through which Greece now enters the electronic stage of its development. The industry will be capable of planning and manufacturing new electronic telephone centers of advanced technology. The final investment will amount to 1.1 billion drachmas and the new plant will employ in the final stage about 1,000 people. [Text] [Athens Domestic Service in Greek 1230 GMT 13 Oct 77 AT]

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END